REMARKS

Claims 37-65 and 67-82 are pending after entry of this response. Claims 38-40, 42-47, 49-53, 55-57, 60-65, and 67-75 have been withdrawn from consideration. Claims 37, 41, 48, 54, 58, 59, 76, and 77 have been rejected. Claims 78-82 have been added. Claims 37, 41, 58, 71 and 72 have been amended in order to comply with the elections of Group I and feline CD86, as well as for clarity. No new matter is presented by the introduction of these claims and amendments. Reconsideration and withdrawal of the below objections and rejections are respectfully requested.

Specification

Applicants have updated the status of the claim to priority in the first line of the specification as required to indicate an expired provisional application.

The title of the invention has also been amended to clearly indicate the invention to which the claims are directed as required by the Examiner.

Response to Rejections under 35 U.S.C. §112, Second Paragraph

Claims 37, 41, 48, 54, 56, 58, 59, 76, and 77 have been rejected under 35 U.S.C. §112, second paragraph as being indefinite for only describing the composition by an allegedly arbitrary name. Applicants respectfully disagree with the rejection. However, in order to expedite prosecution of the instant application, applicants have amended independent claim 37 by adding the amino acid sequence of SEQ ID NO:6. Reconsideration and withdrawal of the §112, second paragraph rejections to claims 37, 41, 48, 54, 56, 58, 59, 76, and 77 are respectfully requested in view of the amendment to independent claim 37.

Claims 58 and 59 have been rejected under 35 U.S.C. §112, second paragraph for failing to point out and distinctly claim the subject matter which the applicant regards as the invention. Applicants respectfully disagree. However, in order to expedite prosecution of the instant application, applicants have amended independent claim 58 in order to address the Examiner's concerns.

Response to Rejections under 35 U.S.C. §112, First Paragraph

Claims 58 and 59 are further rejected under 35 U.S.C. 112, first paragraph for lacking enablement for a vaccine, although expressing CD86 using a viral vector is enabled. Applicants respectfully disagree with the rejection.

As the Examiner is well aware, the "test of enablement is whether a person of ordinary skill in the relevant art, using his or her knowledge and the patent disclosure, could make and use the invention without undue experimentation." *Williams Service Group Inc. v. O.B. Cannon & Son Inc.*, 33 U.S.P.Q.2d 1705, 1723 (Pa. 1994). The instant specification describes how to make and use vaccines comprising a recombinant virus having at least one foreign nucleic acid inserted within a viral genome, including a foreign nucleic acid encoding an expressible feline protein. The Examiner's attention is respectfully directed to the instant specification at pages 114-117, Example 24, which demonstrates how to use the SPV 246 vaccine to partially protect cats (see, Table 1). Construction of the SPV 246 swinepox virus is described in the instant application, for example, at Example 9. Briefly, the recombinant SPV 246 has genes encoding FeLV gag and env, feline CD80, and markers, β-glucuronidase and β-galactosidase. As described in Example 24, vaccinating cats with SPV 246 resulted in only 3 out of 10 cats having persistent viremia after 15 weeks post challenge (Table 1). Therefore, a

recombinant virus comprising feline CD86 is expected to have similar protective effects. For the above reasons, reconsideration and withdrawal of the rejections under 35 U.S.C. §112, first paragraph are respectfully requested.

Response to Rejections under 35 U.S.C. §102

Claims 37, 48, 56, and 58 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,723,705 ("the '705 patent") to Freeman, et al.; or under 35 U.S.C. §102(a) and 35 U.S.C.§102(e) by U.S. Patent No. 5,861,310 ("the '310 patent") to Freeman, et al.; or under 35 U.S.C. §102(b) by WO 95/03408 to Freeman, et al. Applicants respectfully disagree.

Contrary to the contention of the Office Action, none of the cited publications anticipate the recombinant virus having a foreign nucleic acid encoding a feline CD86 protein having an amino acid sequence of SEQ ID NO:6. In order for the '705 to anticipate the claims of the instant application, each and every element of the instant claims must be disclosed in the '705 patent. The Examiner admits that the protein sequence disclosed in the '705 is not identical to that of the instant application. In fact, the '705 "protein sequence at the amino acid level is 71.1% identical to the instantly claimed feline CD86 molecule" (Office Action- page 9). Furthermore, the B7.2 molecule disclosed in the cited publications is human and not feline as claimed in the instant application. Therefore, none of the cited publications anticipate the claimed invention. Reconsideration and withdrawal of the §102 rejection is respectfully requested.

Response to Rejections under 35 U.S.C. §103

Claims 37, 48, 56, and 58 have been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,723,705 ("the '705 patent") to Freeman, et al.; U.S. Patent No. 5,861,310 ("the '310 patent") to Freeman, et al.; or WO 95/03408 to Freeman, et al. in view of D.N. Tripathy (*Advances in Veterinary Medicine*, 41:463-480, 1999). Claim 56 has been withdrawn, so applicants assume that the Examiner intended to reject claim 59. Applicants respectfully disagree with the rejection.

The Examiner contends that "[i]f the prior art comprises stretches of six amino acids that are the identical or "functional conservative variant" as the instantly claimed CD86 immunogenic fragments then the art meets the limitation of the claims drawn to an immunogenic portion" (Office Action- page 10). The Examiner further contends that the '705 patent teaches the use of B7.2 (or CD86) molecules in a viral vector where the amino acid sequence is 71.1% identical to the instantly claimed feline CD86. However, the Examiner admits that the reference "does not teach inserting the B7-2 (CD86) into a swine pox viral vector" (Office Action- page 10).

The Examiner has combined Tripathy with the Freeman publications because Tripathy teaches the use of swinepox viral vectors for introducing foreign genes for vaccination. Moreover, the Examiner contends that it would have been obvious to insert a CD86 molecule into a viral vector as taught by Freeman, et al. using a swinepox expression system as taught by Tripathy. Applicants respectfully disagree with this contention.

As previously presented, none of the Freeman publications discloses a feline CD86 protein or nucleic encoding a feline CD86 protein. Regardless of whether the Freeman

discloses a "functional conservative variant," the sequences disclosed in the Freeman publications are human and not feline as claimed.

Furthermore, the combination of Tripathy with any one of the Freeman publications does not remedy the deficiencies of Freeman. Tripathy is a review article that discusses the use of swinepox virus as a vaccine vector. Tripathy does not teach or suggest a feline CD86 nucleic acid inserted in a swinepox viral vector. Regardless of the fact that the instant viral vector may be a swinepox virus, the foreign nucleic acid encoding feline CD86 is neither taught nor suggested in any of the cited publications. One skilled in the art would have no motivation to alter the human nucleic acid of Freeman and insert the nucleic acid in a swinepox viral vector to result in a recombinant virus with at least one foreign nucleic acid inserted, where the nucleic acid encodes a feline CD86 protein of the claimed invention. Furthermore, the combination of Freeman and Tripathy does not make obvious vaccines comprising the claimed recombinant virus. Therefore, applicants respectfully request reconsideration and withdrawal of the §103 rejections to claims 37, 48, 58, and 59.

CONCLUSION

Based on the foregoing amendments and remarks, applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 2976-4055US2.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 2976-4055US2.

Respectfully submitted,
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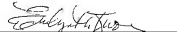
Dated: April 5, 2006 By: 
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